

[54] **PUSHBUTTON KEYBOARD SWITCH
ASSEMBLY WITH IMPROVED DISC
SPRING CONTACT AND PRINTED CIRCUIT
STRUCTURE**

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52 R

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[57]

ABSTRACT

A keyboard system particularly useful when a low profile is desirable as in miniature hand held calculators comprises an electrically insulative circuit board on which a plurality of sets of electrically conductive pads are arranged on one surface thereof. Aligned with each set is an actuating element and actuating button. The actuating element is supported on its peripheral edge on at least one pad of a set and upon actuation comes into bridging electrical contact with one or more pole pads of the set which are arranged near the peripheral edge of the actuating element. Certain of the pads are in electrical connection with electrical circuitry arranged on the reverse side of the board. In an alternative embodiment an electrical jumper is provided so that two circuits may cross one another while being maintained electrically separated from one another. For indefinite actuation of an on-off or a constant switch a sliding button switch is employed. The position of the sliding button controls the direction of force exerted by a coil spring and hence actuation of the switch. In another embodiment a double throw switch is shown.

18 Claims, 17 Drawing Figures

